DOCUMENT RESUME

ED 177 616 CS 502 613

AUTHOR Goldman, Ronald J.
TITLE Demand for Telecommunications Services in the Home.
PUB DATE May 79
NOTE 16p.; Paper presented at the Annual Meeting of the International Communication Association (Philadelphia, Pennsylvania, May 1-5, 1979)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Cable Television; *Consumer Education; *Futures (of Society); *Media Research; *Media Technology; Public Opinion; *Telecommunication

ABSTRACT

Although the availability of telecommunications services from the home has been limited because of the high costs and available technology, a restrictive regulatory environment, the conservative nature of communications systems operators, single technology thinking, and uncertain consumer demand, the situation is changing, resulting in expanded and more diverse service offerings. As many as 117 services potentially available through a multiservice cable communication system have been identified. Research findings over the past seven years have indicated that entertainment, civic functions, and special skills form a cluster of the services most preferred by consumers with a second cluster of education, banking, government information, and visitation via two-way television being desired. The primary use of telecommunications in the consumer sector today is that of entertainment. Other available telecommunications services are limited and little usage data is available, for those services that do exist. Consumer education is needed if extensive use of telecommunications for such functions as banking is to become widespread. (A list of 117 potentially available services and tables of data are included.) (TJ)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED177616

U S DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

DEMAND FOR TELECOMMUNICATIONS SERVICES IN THE HOME

RONALD J. GOLDMAN

CENTER FOR COMMUNICATIONS POLICY RESEARCH

ANNENBERG SCHOOL OF COMMUNICATIONS

UNIVERSITY OF SOUTHERN CALIFORNIA

Over the past decades, futurists have been envisioning a social revolution evolving from the advent of electronic communications technologies in the home. Cable, for example, has been promulgated as the vehicle by which an endless list of services could be provided to consumers (such as those in Table 1). However, as pointed out by FCC Chairman Charles D. Ferris at last year's NCTA convention, the cable industry has been "long on promises" and short on delivery, offering no more than an expansion of the television dial.

The availability of telecommunications services from the home have been limited for several reasons: (1) the high costs and available technology, (2) a restrictive regulatory environment, (3) the conservative nature of communications system operators, (4) single technology thinking, and (5) uncertain consumer demand.

The picture, though, is beginning to change. During this past year, technology has advanced, deregulation has emerged as public policy, entrepreneurs have appeared, and technologies have been intermixed, resulting in expanded and more diverse service offerings.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Ronald J. Goldman
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

CS502613

SERVICES POTENTIALLY AVALIABLE THROUGH A
MULTI-SERVICE CABLE COMMUNICATION SYSTEM

Business: Work at Home

1. Secretarial assistance
2. Person-to-person communications
3. Computer Assisted meetings
4. Electronic mail
5. Adding machine functions
6. Access to company files
7. Message Recoding

Business: Commerce

8. Shopping transactions
9. Grocery price list (information & orders)
10. "Cashless Society" transactions
11. Dedicated newspaper
12. Banking
13. Answering services
14. Real estate listings
15. Better Business Bureau
16. Special sale information
17. Budget preparation and monitoring

Political

18. Council meetings, other local meetings
19. Voter views and participation
20. Nationwide voting surveys and voting
21. Debates on local issues
22. Free Political channel for candidates
23. Access to elected officials

Social Services - State and Federal Governments

24. Social Security
25. Immigration and naturalization
26. Taxes
27. Weather Bureau Information
28. Courts
29. Index of social services

Social Services (cont.)

30. Vocational counseling
32. Welfare
33. Employment service
34. Disaster warnings and evacuation control
35. Marriage counseling

Health

36. Remote diagnosis
37. Emergency medical information
38. Drugs
39. Health insurance
40. Medicare claim processing
41. Prescription communication (doctor-to-pharmacy)
42. Dietetic meal planning and scheduling
43. Ambulance/doctor/hospital coordination
44. Outpatient services
45. Medical and dental appointments and reminders
46. Advice on simple problems
47. Doctor directory
48. Immunization information
49. Mental Health Center (psychiatric consultation)
50. Suicide prevention center
51. Alcoholics Anonymous

Household

52. Water, electric, and gas meter reading
53. Alarm systems
54. Operate household services (turn lights on, light up furnace, etc.)
55. Recipe file
56. Telegrams
57. Mail and messages
58. Daily calendar (reminders about appointments)
59. Address book
60. Equipment maintenance reminders
61. Christmas lists
62. Generate shopping lists, weekly menu
63. Cleaning information
64. Foodstorage information
65. Keeping track of food supply, household items

Agriculture

66. Soil conditions
67. Fertilizers
68. Insecticides
69. Gardening
70. Seasonal crops

Education

71. Correspondence Schools
72. Computer tutor
73. Computer-aided instruction
74. School-related communications
75. College catalog and related information
76. Adult courses, evening courses
77. Seminars
78. Consultation with teachers, professors

Transportation: travel

79. Department of Motor Vehicles
80. Road Conditions
81. Travel advice
82. Traffic conditions
83. Vehicle maintenance reminders
84. Taxi service
85. Bus route scheduling, flight and train schedules
86. Maps
87. Travel accomodations
88. Fares and ticket reservation
89. Tour information
90. Travel and car insurance
91. Passports

Recreation

92. Skiing (snow conditions)
93. Camping (areas, facilities)
94. Tennis (courts, partners)

Recreation (cont.)

95. Golfing (courses, etc.)
96. Picnic areas (facilities available)
97. Flying (lessions, airports)
98. Fishing (season, permit, etc.)
99. Hunting (season, permit, etc.)
100. Boating
101. Games (chess, bridge)

Entertainment

103. Current cultural events
104. Local plays, movies
105. Ticket reservations
106. Restaurant reservations
107. Computer dating

Information: General

108. Index of all services available
109. Library
110. Dictionaries
111. Encyclopedias
112. Expanded yellow page service
113. Stock market information
114. Newspapers
115. Magazines
116. Recent book publications (lists & abstracts)
117. Telephone area codes

REFERENCE: Dr. John de Mercade et al, "Multiservice Cable Telecommunication Systems: The Wired City," final report of Canada, University of Ottawa, Telecommission Study.

Yet, the uncertainty of demand remains; are consumers ready to replace traditional behaviors with the use of electronic modes? Such doubts have caused PRESTEL, the British interactive information system, to change its marketing focus from the consumer to the business sector.

This paper examines the question of demand for telecommunications services in the home by summarizing findings from our research and duscussing some trends that are becoming apparent from usage of currently available services.

Review of Studies

During the last seven years, the Center for Communications Policy Research has been concerned with the provision of services via telecommunications technologies. Attitudes towards telecommunications services in the home have been assessed in a series of surveys. Initiated in conjunction with a 1973 NSF funded project on Telecommunications-Transportation Tradeoffs, the effort presently continues as part of our MEDIA '90 research program, which focuses upon the future of telecommunications in the home.

In these studies, respondents were presented with possible telecommunications service scenarios and asked if they would purchase these services if they were available for approximately the price of their basic monthly telephone bill. Such services have included:

- televised high school, college, and adult education courses;
- shopping by using their television sets to examine products;

- entertainment, such as first-run movies and live sports;
- medical consultation and diagnosis;
- banking;
- civic and state functions, such as voting and driver's license renewal;
- visitation with friends and relatives via two-way television;
- accessing print media, such as newspapers and magazines;
- accessing government information, such as social security information or city council agenda;
- self inprovement or special skill instruction classes, such as how to build a cabinet or care for plants;
- electronic mail; and
- working from the home.

Responses were coded as (1) yes, I would purchase, (2) no, I would not purchase, or (3) don't know.

Thirteen studies, in all, have been conducted. with samples varying to include populations within geographical areas, cable subscribers, undergraduate students, commuting evening graduate students, professional engineers, and women. Although samples varied, several generalizations in preference patterns are apparent. To illustrate these findings, seven studies (described in Table 2) will be discussed in terms of the percentage of respondents who agreed to purchase the services.

As seen in Table 3, the 1973 Los Angeles County survey found no service receiving a majority of support from the respondents. Entertainment would be purchased by 47% of the respondents,

followed by education (39%), visitation with friends (38%), and skill instruction (34%). It must be remembered that this survey was conducted when few electronic technologies and services were available to consumers, and transportation was perceived as inexpensive. At the time, it was our feeling that most of the respondents did not really understand the scenarios which were being suggested.

In the four years following that survey, we have found that understanding has greatly increased, along with demand for the services. The 1977 Los Angeles survey, which focused upon electronic mail and funds transfer, found that demand for banking increased 8% (to 21%). When compared to the later surveys in other California areas, which were no more sophisticated with electronic technologies, most services double in the per cent who would immediately purchase the service. A more rigorous over-time comparison will be made with the data which is currently being collected in the L.A. SMSA.

The three women's surveys conducted in 1977 in three different locations (San Diego, Sacramento, and Fresno) produces similar results. In all three surveys, civic functions, entertainment, special skills, education, banking, government information, and visiting friends received interest by a majority of the respondents. The Marin County survey found entertainment, skills, government information, and civic functions receiving majority support, while Ft. Worth residents showed intention to purchase entertainment, civic functions, government information, and visiting friends. As a side note, a recent survey in Lincoln,

SUMMARY OF SURVEYS

1973 Los Angeles County -- 197 Adults
Random Probability Sample
Telephone Interview

1977 Los Angeles - Long Beach SMSA -- 325 Adults
Random Probability Sample
Telephone Interview

1977 San Diego, CA SMSA -- 500 Women
Cluster Sampling
Face-to-face interview

1977 Sacramento, CA SMSA -- 400 Women
Cluster Sampling
Face-to-face Interview

1977 Fresno, CA SMSA -- 400 Women
Cluster Sampling
Face-to-face Interview

1978 Marin County, CA -- 626 Adults
Random Probability Sample
Telephone Interview

1979 Fort Worth, TX -- 200 Adults
Random Probability Sample
Telephone Interview

1979 Los Angeles - Long Beach SMSA -- 200 Adults
Random Probability Sample
Telephone Interview
(In process)

Nebraska, found that 71% of the cable subscribers wanted educational programs telecasted over the cable.

It may also be noted for comparison purposes that the percentage of women agreeing to purchase services were slightly higher than the population averages, but the rank order were the same.

By looking at the rankings in Table 4, the patterns become more evident. Entertainment, civic functions, and special skills form a cluster as the most preferred services, with a second cluster composed of education, banking, government information, and visitation.

On the bottom of all lists is medical consultation, shopping, and working from the home. These functions have been perceived as requiring in-person interactions, and more importantly, shopping and work are activities which allow individuals to get out of the house. For these reasons, it is unlikely that telecommunications will have a big impact. However, telecommunications could be used as an electronic shopping service for such items as are marketed within the booming mail order industry, and neighborhood work centers could be created which could provide an office away from home, but still minimize the distance to travel.

If these results can be taken at face value, the consumer market for telecommunications services seems to exist. Further insight in consumer demand can be found by examining usage patterns for services currently available.

PERCENT AGREED TO PURCHASE

	L.A. 1973	L.A. 1977	S.D. 1977	Sac. 1977	Fresno 1977	Marin 1978	FTW 1979	Lincoln 1978
Education	38.7		63.8	62.2	60.6	45.8	28	71
Shopping	20.4		39.2	38.8	39.2	25.4	19	
Entertainment	47.3		68.4	71.7	64.8	66.1	70	
Medical	29.2		45.2	40.4	48.4	26.5	24	
Banking	13.2	21	56.4	58.6	60.3	49.8	37	
Civic	27.4		73.1	74.2	72.8	62.3	57	
Visit	38.1		64.3	53.6	50.1	47.0	50.3	
Print	20.8							
Government	26.2		55.8	61.2	56.9	62.6	50.6	
Skill	33.5		66.4	75.7	63.8	64.2	47	
Mail		24						
Job	16.1		38.8	33.1	31.9	27.5	28	

Ranks of Purchased Services

	L.A. 1973	S.D. 1977	SAC 1977	Fresno 1977	Marin 1978	Ft.W. 1979
Education	2	5	4	4	7	7
Shopping	9	9	9	9	10	10
Entertainment	1	2	3	2	1	1
Medical	5	8	8	8	9	8
Banking	11	6	6	5	5	6
Civic	6	1	2	1	4	2
Visit	3	4	7	7	6	4
Print	8					
Skills	4	3	1	3	2	5
Job	10	10	10	10	8	9

Usage Patterns of Telecommunications Services

The primary use of telecommunications in the consumer sector is that of entertainment, which has been discussed extensively in the popular press. No longer are consumers restricted to the network's offerings and schedules. One can now choose from among first-run movies, live sports, night club performances, and the word of God.

Cable pentration has reached 20%, i.e., 14 million households. In addition, the over-the-air pay television bonanza has just begun, with four stations currently operating in Los Angeles, Boston, and New York/New Jersey, and many more ready to begin operation. In Los Angeles, approximatley 250,000 households subscribe to pay television, of which only a quarter are on cable. One over-the-air pay system claims a waiting list of 10,000-15,000 people. Superstations are also becoming prevalent among cable systems, with WTCG (Atlanta) now serving over 3 million households and beginning to appear in the ratings across the country. Similarly, religious organizations (e.g., the Christian Broadcasting Network and the PTL Club) have used satellite-cable interconnects for their fund-raising activities, and they seem to attract a large audience and contributions, though data on both indices are not public. Lastly, we have video cassette recorders located in 2% of American households, and video discs coming soon.

Beyond entertainment, available telecommunications services are limited, and for what exists, little usage data is available.

For example, almost every cable system provides automated channels of news, weather, sports, and stock market returns, which, in essence, is a simplistic version of teletext, but no hard data exists as to how those channels are used by viewers. The same may be said of public access and local government porgrams on cable systems, although all indications are that these services attract small audiences.

What we do know is that consumer behavior is not based on the type of service alone, but highly dependent upon the attributes of this service. For example, in electronic banking (e.g., automatic teller machines and telephone bill paying) systems with limited accessibility (e.g., only allowing the use of touch-tone phones for bill paying), convenience (e.g., restricted hours which the system can be used), reliability, (e.g., frequent periods when the system is down) and capacity (e.g., the number of services offered) have been "marked down for failure".

The popularity of video cassette recorders is that they make television more accessible and convenient. The "time-shift" function, the ability to tape a program for later playback, is the primary use of the machines (75%).

The lack of accessibility and convenience may also be one of the reasons that viewership of adult educational television is low, since most courses are offered at off-hours. Yet, it is amazing that per course enrollment averages between 2500-3000 students for classes offered at 6 a.m. in Los Angeles. What would enrollment be if these courses were televised in the early evening? This is a service which would be provided over

cable or on VCRs, which would allow the most convenience.

A more important lesson is that consumer education is needed. The most successful electronic banking systems have possessed well-thought out marketing plans, and have actively taught customers how to use the system. This is especially true in areas where several banks are providing this service; a saturation effect occurs. In Arizona, where the three major banks operate ATMs, the system has been very successful, with an average of 18,000 transactions per unit per month.

Conclusion

There is a home market to be tapped, but it does need nurturing. As energy costs continue to rise and people become more familiar with telecommunications in their work environments, acceptance of services within the home may not be far away.